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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/084,385	02/28/2002	Hiroshi Sakamoto	381NP/50859	8361

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EXAMINER

LE, DAVID D

ART UNIT PAPER NUMBER

3681

DATE MAILED: 10/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/084,385

Applicant(s)

SAKAMOTO ET AL.

Examiner

David D. Le

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 July 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 08/26/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. This is the third Office action on the merits of Application No. 10/084,385, filed on 28 February 2002. Claims 1-13 are pending.

Documents

2. The following documents have been received and filed as part of the patent application:
 - Information Disclosure Statement, received on 02/28/02
 - Foreign Priority Document, received on 02/28/02
 - Translation of Foreign Priority Document, received on 07/07/04
 - Information Disclosure Statement, received on 08/26/04

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. **Claims 1-5 and 7-13 are rejected under 35 U.S.C. 102(b) as being anticipated by WO 00/26559.**

Note:

To facilitate a better understanding as well as greater accuracy in explaining the following claim rejections, the examiner will refer to the equivalent English version of the WO 00/26559, U. S. Patent 6,712,734 to Loeffler.

Claims 1-5 and 7-13:

Loeffler (Fig. 1; column 1, line 66 – column 5, line 48) discloses a multi-speed transmission comprising:

- An engine, (11);
- A gear-type transmission (10);
- A first input shaft (12 or 13);
- A first clutch (29 or 30);
- A second input shaft (12 or 13);
- A second clutch (29 or 30);
- An output shaft (25);
- A plural numbers of gear trains provided between said first input shaft and said output shaft and between said second input shaft and said output shaft (Fig. 1);
- A plurality of claw clutches provided on said gear trains (Fig. 1; being elements in the vicinities of reference numbers 23 and 28);
- A first motor (34 or 35) connected to said first input shaft;
- A second motor (34 or 35) connected to said second input shaft;
- A battery (i.e., column 3, line 20);
- Wherein either one of said first motor and said second motor is driven so that reduction of torque on said output shaft is compensated, when conducting gear shift through change-over of said gear trains by means of said claw clutch (i.e., column 3, line 47 – column 4, line 2);

- Wherein either one of said first motor and said second motor is driven so that torque fluctuation on said output shaft is suppressed, when conducting gear shift through change-over of said gear trains by means of said claw clutch (i.e., column 3, line 47 – column 4, line 2);
- Wherein either one of said first motor and said second motor is driven so that wear-out of said claw clutch is suppressed by controlling either one of said first input shaft and said second input shaft, when conducting gear shift through change-over of said gear trains by means of said claw clutch (i.e., column 4, lines 3-34);
- Wherein said battery is being charged with an output generated by either one of said first motor and said second motor (i.e., column 5, lines 17-23);
- Wherein either one of said first motor and said second motor is driven with an output discharged from said battery for traveling (i.e., column 5, lines 5-23);
- Wherein electric power generation is conducted through driving either one of said first motor or said second motor by a part of motive power of said engine, so as to charge said battery with generated output obtained by the electric power generation, during traveling with driving power of said engine (i.e., column 4, line 54 – column 5, line 23);
- Wherein either one of said first motor and said second motor is driven by said engine, so as to conduct electric power generation, while the other is driven with generated output obtained through the electric power generation, thereby to travel (i.e., column 4, line 54 – column 5, line 23);

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- Wherein either one of said first motor and said second motor is driven with an output discharged from said battery, thereby to assist driving power of said engine (i.e., column 5, lines 24-28);
- Wherein the second motor is controlled on the basis of torque transmitted by the second clutch (i.e., column 5, lines 28-48); and
- Wherein the second motor is controlled on the basis of the transmission of the engine speed (i.e., column 5, line 24-28).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over WO 00/26559 in view of U. S. Patent No. 6,612,386 to Tamai et al.**

Note:

To facilitate a better understanding as well as greater accuracy in explaining the following claim rejections, the examiner will refer to the equivalent English version of the WO 00/26559, U. S. Patent 6,712,734 to Loeffler.

Claim 6:

Loeffler discloses all elements and limitations as set forth in paragraph 4 above.

Regarding claim 6, Loeffler does not explicitly teach wherein said battery is being charged with an output generated by either one of said first motor and said second motor when a vehicle stops and if remaining capacity of said battery is less than a predetermined value.

Tamai (i.e., paragraphs [0043] – [0044]) teaches a propulsion system for use in a hybrid vehicle comprising the limitation that Loeffler does not teach, as indicated above.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Loeffler battery state of charge (SOC) to include a predetermined set value so that when the battery SOC is below the predetermined set value, at least one of the motors will be commanded to recharge the battery, in view of Tamai, in order to provide the battery with sufficient power to perform its functions such as restarting the internal combustion engine in a hybrid type of vehicle.

Response to Arguments

7. Applicant's arguments with respect to claims 1-9 have been considered but are moot in view of the new ground(s) of rejection.

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David D. Le whose telephone number is 703-305-3690. The examiner can normally be reached on Mon-Fri (0700-1530).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles A Marmor can be reached on 703-308-0830. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


ddl


CHARLES A. MARMOR
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